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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,306	12/31/2001	Simon M. Furnish	InFraReDx-12	4514
26161	7590	01/12/2005	EXAMINER	
FISH & RICHARDSON PC 225 FRANKLIN ST BOSTON, MA 02110			JUNG, WILLIAM C	
			ART UNIT	PAPER NUMBER
			3737	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/037,306

Applicant(s)

FURNISH, SIMON M.

Examiner

William Jung

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 April 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-48 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-48 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed April 23, 2004 have been fully considered but they are not persuasive.

In regards to remarks pages 4-5, section 102 rejection, the Applicant's argument that the element 30 in Winston is a single fiber as opposed to applicant's claimed invention having at least two fibers. Examiner would like to point out that same fiber element 30 is shown in figures 19 and 22 where the fiber bundle is where there are more than one fibers. Therefore, Winston anticipates at least two fibers. In addition, Winston clearly anticipates that the reflector is rotated to sweep 360 or radially outwards (col. 2, lines 4-13). Therefore, Examiner maintains the rejection from the previous Office Action (dated Jan. 21, 2004), which is restated below.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 8, 13-25, 30-36, and 39-48 are rejected under 35 U.S.C. 102(b) as being anticipated by *Winston* (US 5,916,210).

Claims 1, 20, 24, 25, 33, 39-41, and 44: Winston anticipates all claimed features in claims 1, 20, 24, 25, 33, 39-41, and 44. Winston discloses a catheter tip arranged in an elongated catheter for delivery of energy signal to permit light energy beam to analyze body

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tissue. The catheter tip includes first and second reflective surface 38, 103 spaced apart from one another with fiber delivery connection. The housing of the flexible catheter is rotatable on a sheath for insertion of the catheter into a body for tissue analysis (col. 1, line 64 – col. 2, line 51; col. 4, lines 9-65; col. 7, lines 28-47).

Claims 2 and 3: Winston also discloses of frame member 53 arranged to receive and align the reflective surfaces and the beam-directing member (col. 5, lines 18-23).

Claims 4 and 5: Winston discloses of slot having shoulder or fitting sleeve over the rotating shaft to guide and align the reflective surface and allow the catheter to be manipulated into the sheath (col. 4, lines 23-34).

Claims 6-8, 34, 35-37, 46, and 48: Winston discloses of the catheter described above with the reflector fitting into a pocket like flange where the mirror reflector is fixedly attached to the pocket where the mirror or reflectors redirects the light beams (col. 5, line 65 – col. 6, line 11).

Claims 13-15 and 17: Winston's catheter disclosure includes reflective surface being unitary, within the catheter housing described having proximal end and distal ends with energy collecting fiber and slot to align the reflective surface (col. 4, lines 24-57).

Claim 19: Winston's catheter includes reflective surface enclosed in a catheter tip (col. 5, lines 59-64).

Claims 16, 18, 21-23, 43, and 45: Winston shows in figures 4, 5, and 12a, that the reflective surfaces are in non-parallel position with one being larger than the other and the reflective surface is curvilinear.

Claims 30 and 47: Winston discloses of optical fiber 30 being enclosed within the catheter housing.

Claim 31: Winston discloses that the light delivery fibers are diametrically opposed to the rotation axis to prevent from unbalancing and minimize eccentricity during rotation (col. 9, line 54 – col. 10, line 7).

Claim 32: The reflective surfaces operate independently, therefore the energy delivery is independent.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Winston*.

Winston substantially discloses of all claimed features in claims 7 and 37. Winston does not specifically disclose of manner in which the reflective surface such as mirror is held in place, however, it is obvious to one skill in the art at the time the invention was made to apply means to fastened an object by various design such as glue/epoxy, bolts, hooks, fastener, etc.

***Allowable Subject Matter***

6. Claims 9-12, 26-29, and 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Jung, Ph.D. whose telephone number is 571-272-4739. The examiner can normally be reached on Mon-Fri 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WJ  
January 8, 2005

  
ELENI MANTIS-MERCADER  
PRIMARY EXAMINER